

1 **DIRECT TESTIMONY OF**

2 **MICHAEL D. SHINN**

3 **ON BEHALF OF**

4 **SOUTH CAROLINA ELECTRIC & GAS COMPANY**

5 **DOCKET NO. 2012-2-E**

6
7 **Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND CURRENT**
8 **POSITION.**

9 A. My name is Michael D. Shinn, and my business address is 220 Operation
10 Way, Cayce, South Carolina 29033. I am currently employed by SCANA
11 Services, Inc. as General Manager of the Coal and Oil Procurement Department
12 (“Fuel Department”). In this position I manage the purchase and delivery of coal,
13 No. 2 fuel oil and limestone on behalf of South Carolina Electric & Gas Company
14 (“SCE&G” or the “Company”) and as agent for South Carolina Generating
15 Company (“GENCO”).
16

17 **Q. DESCRIBE YOUR EDUCATIONAL BACKGROUND AND YOUR**
18 **BUSINESS EXPERIENCE.**

19 A. I earned a Bachelor of Science Degree in Mechanical Engineering from the
20 University of South Carolina in Columbia, South Carolina in 1995. While in
21 college, I was a student intern in the Fossil Hydro Power Plant Performance
22 Group for 5 years. Since graduation, I have held various positions within the Fuel

1 Department to include managing rail transportation and delivery, spot coal
2 purchasing, coal quality management, synthetic fuel optimization and state and
3 federal regulatory reporting. In my most recent position as Manager of Fuel
4 Technical Services, Industrial Coal and Synfuel, I have worked with coal
5 suppliers and SCE&G's power plants to increase fuel and transportation
6 flexibility as well as maximize the utilization of the Company's assets. In
7 December 2009, I was promoted to my current position and report directly to the
8 Senior Vice-President, Fuel Procurement and Asset Management, SCANA
9 Services, Inc.

10
11 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

12 A. The purpose of my testimony is to describe the procurement and delivery
13 activities for coal and No. 2 fuel oil used in electric generation for SCE&G as
14 well as GENCO's Williams Station for the period January 1, 2011 through
15 December 31, 2011 (the "Review Period"). I also discuss changes that have
16 occurred in coal markets since the last annual fuel adjustment hearing and how
17 these changes affected coal procurement during the Review Period. Finally, I
18 describe the procurement and delivery of limestone for our wet scrubbers located
19 at our Wateree and Williams steam plants.

1 **Q. PLEASE DESCRIBE GENCO AND ITS RELATIONSHIP TO SCE&G.**

2 A. GENCO was incorporated on October 1, 1984 and owns the Williams
3 Electric Generating Station. GENCO sells to SCE&G the entire capacity and
4 output from the Williams Station under a Unit Power Sales Agreement approved
5 by the Federal Energy Regulatory Commission. Hereafter, when I refer to
6 SCE&G's fossil steam plants, I include GENCO.

7
8 **Q. PLEASE SUMMARIZE SCE&G'S FUEL PROCUREMENT NEEDS AND**
9 **PURCHASING PRACTICES.**

10 A. Under my supervision, the Fuel Department purchases all necessary coal,
11 No. 2 fuel oil, limestone and associated transportation for SCE&G's fossil plants
12 focusing on reliability of supply, conformity with operational and environmental
13 requirements, and reasonable prices. Given its mix of generation assets, SCE&G
14 has significant need for coal in any given year to provide reliable energy service
15 to our customers. In 2011, for example, SCE&G consumed 4,929,754 tons of
16 coal in the production of electricity for its customers. SCE&G's burn rate
17 decreased in 2011 compared to 2010. The burn rate for coal in 2011 was 6.7%
18 lower than in 2010, which is a decrease in coal consumption of 356,402 tons.

1 **Q. HOW DOES THE COMPANY SECURE NECESSARY QUANTITIES OF**
2 **COAL AND NO. 2 FUEL OIL AT COMPETITIVE PRICES?**

3 A. SCE&G maintains an active list of qualified suppliers of coal and No. 2
4 fuel oil used to power its plants. Typically, as contracts expire or needs are
5 identified, solicitations are issued for competitive sealed bids. Responses to these
6 solicitations inform our knowledge of market demand and prices. Moreover,
7 because the responses to these solicitations often include proposals for coal
8 supplies with specifications different than the requested specifications, these
9 responses also aid our ongoing efforts to ascertain price differences for varying
10 qualities of fuels.

11
12 **Q. HOW DOES SCE&G APPROACH THE MARKETPLACE FOR COAL**
13 **AND NO. 2 FUEL OIL?**

14 A. Coal is procured under long-term (more than one year) and spot purchase
15 (up to one year) agreements to achieve a balance of reliable supplies, while
16 maintaining flexibility to react to market changes or short-term system needs.
17 Under normal market conditions, SCE&G seeks to have long-term purchases
18 represent approximately 75% to 80% of projected system demand. Spot
19 purchases provide a mechanism to manage inventories and react to short-term
20 changes in the marketplace, and generally represent 20% to 25% of projected
21 system demand.

1 While SCE&G's goal has been and remains one of balancing its purchases
2 of coal between long-term and short-term contracts, market conditions may alter
3 this goal in any given year. In the Review Period, demand for energy vacillated
4 greatly and was above normal due to a colder than normal winter and warmer
5 than normal summer, but then shifted to below normal demand during the closing
6 months of the year. In addition, natural gas prices remained at very competitive
7 rates for much of the year making it the fuel of choice for economic dispatch in
8 many circumstances.

9 In contrast to the complexities of coal purchasing contracts, contracts for
10 No. 2 fuel oil are requirements contracts that are competitively solicited every
11 two years. Generally, pricing for these contracts is based upon market indices
12 that are adjusted daily.

13
14 **Q. PLEASE SUMMARIZE THE QUANTITY, QUALITY, AND TERM OF**
15 **THE COMPANY'S COAL PURCHASES.**

16 A. During the Review Period, the Company took delivery of 3,942,393 tons of
17 coal under long-term agreements and approximately 835,536 tons of coal through
18 spot purchases. All together, long-term agreements provided 82.51% of the
19 requirement for the Company's five coal-fired stations and GENCO's Williams
20 Station, while spot purchases accounted for the remaining 17.49% of our coal
21 requirements during 2011.

1 For the current period of January 2012 through December 2012, the
2 Company has long-term contracts with seven (7) suppliers for the delivery of 3.4
3 million tons of coal. This quantity represents approximately 68.0% of SCE&G's
4 expected total coal receipts for 2012. The coal purchased under these contracts
5 ranges in quality from 12,300 to 12,700 British Thermal Units ("BTU") per
6 pound and sulfur contents from 0.75% to 1.60%. Most of these contracts are for
7 an initial period of two years with some options to renew. The amount of coal
8 under contract will vary from year to year, and the contract terms will vary from
9 contract to contract. For example, in some of our coal contracts, we have been
10 successful in negotiating fixed pricing for the term of the contract, while other
11 coal contracts contain predetermined price adjustments.

12 Looking forward into 2013, the Company has long-term contracts with
13 three (3) suppliers totaling approximately 2.0 million tons of coal. This quantity
14 represents approximately 61% of SCE&G's expected total coal receipts for 2013.
15 The coal purchased under these contracts is expected to range in quality from
16 12,300 to 12,700 BTU per pound and sulfur contents from 0.75% to 1.60%.

17 During 2012, the Company will continue to carefully evaluate its need for
18 coal in future periods. In 2012, we anticipate that SCE&G will increase its
19 commitments for coal supply under long-term contracts for 2013 and beyond.
20 During the Review Period, coal prices have been relatively stable to slightly
21 decreasing. Prices have been influenced by global demand, environmental

1 regulations, other regulatory requirements, weather patterns and pricing of
2 competitive fuels.

3 To fulfill its future requirements, the Company may choose to negotiate
4 with existing coal suppliers to extend or renew existing long-term contracts, may
5 choose to negotiate directly with other suppliers seeking new contracts, or may
6 decide to issue a general solicitation for some or all of its needed long-term
7 supply. The Company's goal is always to provide our customers with reliable
8 coal-fired generation at reasonable fuel prices. We have worked diligently in the
9 past to achieve this goal, and will continue to do so in 2012 and beyond.

10
11 **Q. HOW DOES SCE&G ENSURE THAT THE RIGHT QUANTITY OF FUEL**
12 **SUPPLIES IS AVAILABLE TO MEET GENERATION DEMANDS?**

13 A. SCE&G uses several steps to bring the fuel supply and demand factors
14 together. Fuel usage levels are calculated and forecasted for each of the
15 generating plants. Coal and No. 2 fuel oil inventories are then validated and
16 contract quantities are summed and compared against system usage to determine
17 needs going forward. With this information, the Fuel Department carefully
18 evaluates the Company's coal requirements and determines whether
19 transportation options under current contracts, spot purchases or additional long-
20 term agreements are appropriate. Through this process, SCE&G has been
21 successful in leveraging long-term and short-term coal purchases to achieve

1 reasonable purchase prices while ensuring the reliability of coal supplies
2 necessary to support system needs.

3 No. 2 fuel oil is purchased to ensure adequate back up to natural gas for
4 SCE&G's intermediate and peaking generators. Contracts are awarded on a
5 biannual basis using competitive bids. Typically, fuel storage tanks are filled
6 going into peak usage periods.

7
8 **Q. HOW DOES THE COMPANY DETERMINE A "REASONABLE PRICE"**
9 **FOR FUEL PURCHASES?**

10 A. The Fuel Department works diligently to achieve an optimization between
11 adequate supplies of acceptable quality at reasonable purchase prices. The
12 ultimate value of the delivered fuel (coal or No. 2 fuel oil) is determined by the
13 actual delivered cost per Million British Thermal Units ("MMBTU"), accounting
14 for any fuel impacts in the operation of our generating plants. Market prices
15 fluctuate due to such things as seasonality, political turmoil, national weather
16 trends and domestic/international supply/demand imbalances. SCE&G
17 continuously evaluates factors that impact prices, while employing contract
18 strategies such as predetermined price adjustments, price collars, and quarterly
19 adjustments to mitigate the effect market conditions have on coal contracts.
20 Market publications, indices, industry solicitations, trade associations, interacting
21 with market participants, and contract negotiations are some of the ways that we
22 stay abreast of market trends and conditions.

1 **Q. HOW DOES THE COMPANY MANAGE COAL INVENTORIES TO**
2 **ENSURE RELIABILITY AND AVAILABILITY?**

3 A. To maintain adequate supply at its coal-fired generating facilities, the
4 Company continuously manages inventories using long-term contracts, spot
5 market purchases, and transportation options under its existing contracts. The
6 Company uses these tools in support of its efforts to maintain an inventory of
7 approximately 925,000 tons of coal based on the average of each of twelve
8 months' ending inventories to support anticipated consumption. This
9 methodology allows for an inventory of more than 925,000 tons at the beginning
10 of high demand periods and less than 925,000 tons entering the milder months.
11 This inventory level aids in protecting SCE&G against availability, production
12 and delivery problems that may arise from time to time. It also affords the
13 resources to meet our supply needs when short-term market prices are
14 unfavorable. It is always important to balance short-term needs against long-term
15 requirements and expected future operating conditions.

16
17 **Q. PLEASE PROVIDE AN OVERVIEW OF TRANSPORTATION RATES**
18 **DURING THE REVIEW PERIOD.**

19 A. In 2011, CSX Transportation, Inc. ("CSX") remained the primary rail
20 transporter of coal for SCE&G. While the CSX contract rates remained relatively
21 stable during 2011, these rates are subject to quarterly adjustments according to
22 indices published by the American Association of Railroads. SCE&G took

1 delivery of approximately 4.8 million tons of coal under this rail contract during
2 2011, representing 100% of the Company's total receipts of coal.

3 Norfolk Southern Railway Company ("NS" or "Norfolk Southern") has
4 only one delivery point in SCE&G's service territory. This delivery point is at
5 Wateree Station and could account for nearly one-third of the Company's need for
6 coal deliveries in some years. However, in 2011 SCE&G was unable to use
7 Norfolk Southern's rail services due to minimum transportation requirements
8 under the CSX contract.

9 SCE&G will continue to explore opportunities to utilize transportation
10 options where they economically exist to reduce costs to our customers. As in the
11 past, the Company will utilize the rail services of Norfolk Southern to maximize
12 benefit to our customers in the short- and long-term as agreements are negotiated
13 where NS is the most economic and reliable transporter.

14
15 **Q. PLEASE DESCRIBE THE STATE OF THE INTERNATIONAL COAL**
16 **MARKET IN WHICH SCE&G PARTICIPATES AND ITS CURRENT**
17 **PLANS REGARDING IMPORT COAL.**

18 A. At the present time international market prices for coal make it
19 uneconomical for SCE&G to import coal. Because the prices for coal in
20 international markets reflect strong demand in these markets for coal, the growing
21 trend is for coal from the United States to be exported to international destinations.
22 For example, CSX reports that it transported for export 42 million tons of coal in

2011 and expects a similar trend in 2012. Five years ago the amount of export coal shipped by CSX was only 12 to 13 million tons. Given growing economic activity abroad, reduced domestic coal consumption, and the depressed value of the dollar, it is expected that this trend of increasing exports of domestic coal will continue. As exports of domestic coal into foreign markets grows, pressure will also increase on domestic coal prices over time.

Given the current and anticipated demand for coal in international markets, we project the delivered price per MMBTU for foreign coal will exceed domestic prices at least in the short term. Thus, the Company does not currently expect to purchase any import coal via waterborne vessel in 2012. However, SCE&G will continue to monitor and be informed of price changes in foreign markets to ensure that SCE&G and its customers may take advantage of delivered competitive prices in these markets.

Q. WHAT WERE SCE&G'S DELIVERED COAL COSTS FOR THE REVIEW PERIOD?

A. SCE&G's average cost in dollars per MMBTU by month for coal purchased for steam plants during the Review Period is set forth below in Table 1.

Table 1

| Jan. 11 | Feb. | March | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| \$4.25 | \$4.37 | \$4.48 | \$4.34 | \$4.36 | \$4.35 | \$4.36 | \$4.56 | \$4.46 | \$4.48 | \$4.46 | \$4.52 |

Q. WHAT CHANGES DOES THE COMPANY ANTICIPATE IN THE COAL MARKET FOR THE 2012 FORECASTED PERIOD?

A. Notwithstanding the growing demand in foreign markets, SCE&G's coal prices for the forecasted period are expected to remain stable or trend downward slightly due to projections that we may increase spot coal purchases at prices below our long term contract prices. For example, over the past 12 months, the price per ton of Central Appalachian coal decreased from \$75.00 per ton on January 31, 2011, to \$68.25 per ton on December 31, 2011, representing approximately a 10% decrease. Spot coal prices have further moderated in early 2012, decreasing to approximately \$60.00 per ton. While we do not expect any further substantial reduction in prices in 2012, we do believe spot prices will remain favorable and relatively stable.

Global demand for coal, particularly metallurgical coal used to produce steel, has resulted in sharp increases in the price of domestic metallurgical coal in the recent past. The price of domestic coal available to utilities is now more frequently being priced on the international market with price movements trending up or down based on international indices. The growth of coal exports into Europe has doubled between 2009 and 2011 with the growth trend expected to continue. This trend in part reflects the ongoing shift from nuclear generation to coal-fired generation of electricity in some European countries, most notably Germany. However, even with the increase in coal exports to European as well as Asian markets, the increased use of natural gas for power generation and

1 decreased industrial demand will continue to force coal companies to reduce
2 production to conform to overall reduced demand for coal as an energy source.

3 Other factors that continue to affect production include a dwindling coal
4 reserve base, greater regulation by the Environmental Protection Agency (“EPA”)
5 and Mine Safety and Health Administration (“MSHA”), the redeployment of
6 capital dollars to metallurgical mines versus steam coal mines, the ability to
7 borrow money for recapitalization of mines in general and the inability of mining
8 companies to acquire new mining permits. These factors will continue to put
9 upward pressure on coal production costs during 2012 and beyond.
10 Notwithstanding these upward pressures, the Company expects coal prices to
11 remain relatively stable in 2012. This expected stability in coal prices in 2012 is
12 driven primarily by the low cost of natural gas coupled with the addition of new
13 combined cycle gas generation coming on line outside of SCE&G’s service area,
14 resulting in reductions in the demand for coal.

15
16 **Q. WHAT HAS BEEN THE RECENT PRICING TREND IN THE NO. 2 FUEL**
17 **OIL INDUSTRY?**

18 A. Delivered No. 2 fuel oil average monthly prices during the Review Period
19 ranged from a low of \$19.92/MMBTU in January of 2011 to a high of
20 \$24.12/MMBTU in November of 2011. This pricing was up considerably from
21 2010 reflecting increased domestic consumption, actions of the Organization of

Petroleum Exporting Countries or OPEC, increasing demand in Asian markets and continued political instability in oil producing countries.

Set forth below is Table 2 that shows the average system delivered No. 2 fuel oil prices in \$/MMBTU for the Review Period for No. 2 fuel oil purchased for steam plants, gas turbines and combined cycle units.

Table 2

| Jan. 11 | Feb. | March | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| \$19.92 | \$21.01 | \$23.39 | \$24.25 | \$22.93 | \$22.75 | \$23.88 | \$22.54 | \$22.91 | \$23.01 | \$24.12 | \$22.23 |

Q. WHAT ADDITIONAL STEPS IS THE COMPANY TAKING TO MITIGATE FUEL-RELATED EXPENSES?

A. SCE&G continues to expand its coal specifications by purchasing coal of lower quality where practicable and acceptable to a coal-burning plant. During 2011, SCE&G took delivery of 908,874 tons with contracted BTU per pound values less than its traditional specifications. A substantial portion of this coal was blended and consumed at SCE&G's Cope Station.

As mentioned earlier in my testimony, SCE&G has the ability to take coal deliveries from Norfolk Southern, a competing railroad with the CSX, for use at our Wateree Station in Eastover, South Carolina. We will utilize Norfolk Southern when possible and economically beneficial to our customers. Currently, Wateree Station is the only plant in SCE&G's system which has the capability to

1 take delivery from two different rail carriers. SCE&G's other plants are limited to
2 CSX for plant direct rail delivery.

3 SCE&G is also evaluating the fuel flexibility for all of its coal-fired plants.
4 This evaluation considers fuels from different regions of the United States and
5 South America with multiple sulfur, ash and BTU levels. Currently, transportation
6 rates, and in some cases original plant design, make coal from other basins non-
7 competitive with Central Appalachia due in large part to significant differences in
8 coal qualities that could impact plant operations.

9 In 2012, SCE&G will test burn an Illinois Basin coal blend at Cope Station
10 to gauge the impact on operational costs and plant reliability. Although coal from
11 the Illinois Basin does not meet SCE&G's system coal quality specifications, this
12 coal could yield a very competitive delivered cost per million when compared to
13 Central Appalachian coals, if our test burns demonstrate that operational costs and
14 reliability are not adversely impacted.

15
16 **Q. DO SCE&G'S COAL-FIRED PLANTS HAVE LIMITATIONS THAT**
17 **RESTRICT EXPANDING FUEL SPECIFICATIONS?**

18 A. Yes, they do. Original plant design is the major limitation to expanding our
19 fuel specifications beyond our current specifications, while maintaining plant
20 reliability and complying with growing environmental restrictions. As mentioned
21 earlier, these limitations are being carefully analyzed and evaluated. The goal is to
22 expand fuel specifications where reasonably possible, allowing the Fuel

1 Department to buy the most competitively priced fuel for reliable operation of our
2 coal-fired plants.

3 Higher quality coal that must be purchased to comply with stricter
4 environmental laws for certain power plants is also a limitation to expanding fuel
5 specifications. Normally these coal supplies will be lower in sulfur content and
6 have a higher market price than coal containing higher sulfur levels. As
7 restrictions on emissions increase, fuel prices are likely to be impacted if the
8 availability of the fuel needed to meet new requirements is in limited supply.

9
10 **Q. WHAT RESPONSIBILITIES DOES THE FUEL DEPARTMENT HAVE**
11 **WITH RESPECT TO SO₂ AND NO_x ALLOWANCES?**

12 A. The Fuel Department purchases or trades EPA sulfur dioxide (“SO₂”) and
13 nitrogen oxides (“NO_x”) emission allowances as needed by SCE&G.

14 The Clean Air Act Amendment of 1990 requires electric utilities to reduce
15 SO₂ emissions. An SO₂ Emission Allowance Trading Market was established by
16 the EPA to assist utilities in managing the costs of complying with these new
17 regulations. The Company has purchased SO₂ allowances as part of our overall
18 strategy to compensate for our SO₂ emissions. SO₂ emission allowance prices
19 have decreased during the Review Period due to the addition of scrubbers in the
20 industry as well as continued uncertainty over EPA modifications to
21 environmental regulations for the utility industry. SO₂ allowances are

1 approximately \$2.00 per allowance (one ton SO₂) currently and are not expected
2 to increase significantly until the EPA gives final guidance on the issue.

3 The Fuel Department also addresses the Company's needs for NO_x
4 emission allowances. Current annual NO_x allowance prices are approximately
5 \$45.00 per ton.

6
7 **Q. PLEASE EXPLAIN THE FUEL DEPARTMENT'S ACTIVITIES**
8 **RELATED TO THE PROCUREMENT OF LIMESTONE FOR SCE&G'S**
9 **POLLUTION CONTROL FACILITIES.**

10 A. The Fuel Department is responsible for securing adequate and reliable
11 supplies of limestone for the effective operation of wet limestone scrubbers at
12 Wateree and Williams Stations. There are limited suppliers for limestone for the
13 Company's Williams and Wateree Stations. During the Review Period, the
14 Company acquired a majority of its supplies of limestone from a single source.

15 The Company continues to evaluate potential new suppliers to determine if
16 their products are operationally and chemically sufficient for use in the scrubbing
17 process. Other potential sources of supply have been identified and preliminary
18 tests have been conducted. However, more testing is required to determine
19 whether these alternatives are viable.

20 The limestone is delivered to Williams and Wateree Stations by truck since
21 the current source of supply is located near the plants. In summary, the Company
22 continues to evaluate supply and transportation options designed to ensure

adequate and reliable supplies of limestone at reasonable prices at its Williams and Wateree Stations.

Q. PLEASE PROVIDE THE COMMISSION WITH AN UPDATE CONCERNING LEGAL ACTION TAKEN BY SCE&G AGAINST SOME COAL SUPPLIERS.

A. In 2009, the Company initiated legal action against several of its coal suppliers for non-performance. The Company's claims against all suppliers but one have either been settled or litigated before the American Arbitration Association. The one unresolved case is scheduled to be heard, subject to any scheduling delays that may arise, later this year before the American Arbitration Association. Net benefits received as a result of resolved claims were applied to reduce fuel costs when the benefits were realized. Any future benefits will likewise be applied to reduce fuel costs when the benefits are realized.

Q. WHAT REQUEST DOES SCE&G MAKE OF THE COMMISSION IN THIS PROCEEDING?

A. The Coal and Oil Procurement Department has made reasonable and prudent efforts to obtain reliable, high quality supplies of coal, No. 2 fuel oil and limestone and associated transportation at the lowest possible cost to SCE&G's customers. Therefore, on behalf of SCE&G, I respectfully request that the

1 Commission find that the Company's fuel purchasing practices were reasonable
2 and prudent for the Review Period.

3

4 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

5 A. Yes.